

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

March 25, 1862.—Dr. J. E. Gray, V.P., in the Chair.

The Secretary announced that Dr. G. Bennett, F.Z.S., had shipped a living Kagu (*Rhinochetus jubatus*) for the Society, from Sydney, on the 16th of January previous, and read the following extracts from a letter just received from that gentleman relating to the habits of this remarkable bird:—

“Of the two Kagus brought from New Caledonia alive, one died on the 4th of January, 1862, and on dissection proved to be a female. It was larger than the one now sent to England alive; and when that one dies (as the plumage and crest are similar, and both appeared to be fully grown, the only distinction being size) it would be interesting to ascertain the sex. The Kagu is a very interesting bird, readily domesticated. It is amusing to see them politely bowing their heads one to the other, elevating their crests at the same time, and then finish by coquetting about. They climb up the wires in front of their place of confinement just as the Red-billed Porphyrios. They often leap, aided by the wings, upon the stumps or low branches of trees; but they invariably roost on the ground, in an erect position, with the head buried between the shoulders or under the wing, and in confinement never seek any elevated position for roosting. In New Caledonia they are usually seen about the sea-coast, by the side of rivers; and although in some parts of the island they are very numerous, yet about the settlement of Port du France they are seldom seen more than from two to four together at the same time. When disturbed they only fly to the height of a few feet, and escape into the thick brushwood. They are eaten by the natives. A lady just returned from New Caledonia informs me that a pair have been kept tame at Port du France for nearly three years, and are well-known roamers of the streets of that settlement. When a dog approaches them, they elevate their crests and flap their wings to drive it away. They are usually to be seen about those places where the men are digging, approaching them fearlessly for the sake of procuring worms or grubs that are turned up from the ground by the hoe or spade. The same lady describes a noise they make in their wild state, when concealed among the reeds or bushes, as resembling that of a young puppy crying for its mother.”

The following extract was read from a letter addressed by Colonel Abbott to George O. Wray, Esq., and communicated by the latter gentleman to the Secretary:—

“In March 1838, as near as I can recollect, near the village of Pur-Buddah, distant $1\frac{1}{2}$ mile from the town of Akyab in Arracan, two Sepoys of the Arracan Local Battalion captured under a rock a large female Boa, some 12 feet in length, and abstracted with her a

nest of eggs forty-eight in number. Both Snake and eggs were presented to me by a friend, who knew that I was interested in such things. My object now was to secure this prize, and see what would result from the detention. Unfortunately I was taken seriously ill, and neglected to keep notes on the subject, and all I now state is from recollection. The Python was in my possession for upwards of two months and a half, and was constantly coiled around her eggs, refusing food in various forms, living and dead, viz., fowls, rats, and frogs. I then quitted Arracan on sick-leave and came to Calcutta, bringing the Snake and eggs with me, and made them over to Dr. Pearson (since dead) and Dr. Evans. The Snake was in my possession, as I said before, about ten weeks in the province and ten days (more or less) in Calcutta, and nearly a week on the voyage up to Calcutta, as we went to Chittagong: this will bring the eggs and Snake to be known to me three months; and the eggs were still not hatched.

“On visiting the Museum and finding the eggs in the condition I sent them in, curiosity led us to detach an egg from the mass; and looking at it carefully it was supposed to be bad, as it exhibited marks of green mildew and soil, and there was no motion in it. We then determined to open it with a knife, and to our surprise we extracted a fully formed live young one, active and strong, which would, I have no doubt, have lived had it been allowed. I left Calcutta shortly after this, and do not know what became of the Boa and remaining eggs; but, should further information be required, I would suggest that application be made to Mr. Blyth, if still in Calcutta, or to the Curator of the Asiatic Museum of Calcutta.”

The following papers were read:—

CHARACTERS OF NINE NEW SPECIES OF BIRDS RECEIVED IN COLLECTIONS FROM BOGOTA. BY P. L. SCLATER, M.A., PH.D., F.R.S., SECRETARY TO THE SOCIETY.

I have lately had an opportunity of examining several large collections of bird-skins from Bogota, containing altogether some three or four thousand individuals. The greater number of the species to which these belong are now well known in Europe, from their repeated importation in Bogotan collections; but I have found a few, principally among the less known groups, which appear to have been altogether overlooked or hitherto not collected. I beg leave to submit to the Society the following descriptions of these species.

Fam. TURDIDÆ.

1. TURDUS EPHIPPIALIS.

Supra cinereus, alis extus, nisi in primariorum parte terminali, et interscapulio rufescente indutis: subtus pallide cinereus: gutture albo, maculis triangularibus fuscis striato: ventre imo et crisso albis: tectricibus subalaribus et remigum parte interna

pallide castaneis: rostro plumbeo: tomis pallescentibus: pedibus fuscis.

Long. tota 8·5, alæ 4·7, caudæ 4·2 poll. Angl. et dec.

Hab. In Nov. Granada int.

Mus. P. L. S.

Obs. Affinis *Turdo albiventri* ex Cayenna, et ptilosi fere simili, sed interscapulio et alis extus rufescentibus, et subalaribus castaneis facile dignoscendus.

I may remark that I have now received from the Berlin Museum a Thrush marked *Turdus amaurochalinus*,—a species with which I was not acquainted when I prepared my Synopsis of the American Thrushes, already printed in the Society's 'Proceedings.'* This bird is certainly undistinguishable from what I consider to be *Turdus albiventris* of Spix, of which I have examples from Cayenne, Brazil, Bolivia, and Ecuador. My *Turdus ignobilis* of the highlands of New Granada is barely separable from the same species. On the other hand, there can be no question about the distinctness of the present Bogotan species, looking to its rufous interscapulium and wing-edgings, and dark, almost chestnut-brown under wing-coverts.

Fam. VIREONIDÆ.

2. HYLOPHILUS FERRUGINEIFRONS.

Olivaceus: alis nigricanti-fuscis, extus olivaceis: cauda olivacescenti-fusca: pileo brunnescente tincto, fronte ferruginolento: subtus dilutior, gutture et ventre medio albicantioribus: rostro plumbeo, tomis pallescentibus, pedibus fuscis.

Long. tota 4·0, alæ 2·1, caudæ 1·5.

Hab. In Nov. Granada int.

Mus. P. L. S.

Obs. Affinis *Hylophilo ochraceicipiti* mihi ex Mexico, sed colore supero olivaceo rostroque robustiore differt. Remex primus, prout semper in hoc genere, spurius, dimidio brevior quam secundus: quartus, quintus et sextus fere æquales et longissimi.

I have tried in vain to reconcile this bird with Lafresnaye's *H. flavipes* (Rev. Zool. 1844, p. 342). It is certainly not his *Hylophilus semibrunneus* (l. c. p. 341), as I have seen specimens of the latter in the British Museum.

Fam. TANAGRIDÆ.

3. CHLOROSPINGUS OLEAGINEUS.

Olivaceus fere unicolor, fronte et regione oculari et corpore subtus flavicanti-olivaceis: alis nigricanti-fuscis, extus brunnescenti-olivaceo limbatis: cauda brunnea unicolore: rostro nigricanti-brunneo: pedibus fuscis.

Long. tota 5·5, alæ 3·25, caudæ 3·5.

Hab. In Nov. Granada int.

Mus. P. L. S.

* See P. Z. S. 1859, p. 321.

Obs. Affinis *C. superciliari* et *C. rubrirostri* et eadem forma, sed colore fere unicolore notabilis.

Fam. DENDROCOLAPTIDÆ.

4. PHILYDOR PANERYTHRUS.

Murino-rufescens: alis extus et cauda tota rufis, illarum pogoniis interne nigricantibus: subtus læte fulvo-rufus: rostro albi-cante, hujus basi, cum pedibus, plumbea.

Long. tota 7·5, alæ 3·9, caudæ 3·6.

Hab. In Nov. Granada int.

Mus. P. L. S.

This bird is allied in form to *Philydor rufus* (Vieill.) of Brazil (*P. ruficollis*, Spix, Av. Bras. i. p. 74, pl. 75), though the rectrices are not quite so sharply pointed. It may be distinguished by its more uniformly rufous coloration, and the complete absence of the cinereous head. I have a single Bogotan specimen, the only individual I have met with of this species.

Fam. TYRANNIDÆ.

5. LEPTOPOGON ERYTHROPS.

Olivaceus, pileo cinereo, loris, oculorum ambitu et corpore subtus ad medium pectus fulvide rufis: ventre flavicante: alis nigricanti-fuscis, tectricum apicibus fulvo terminatis; remigibus omnibus extus olivacescenti-fulvo marginatis: campterio alari, subalaribus et remigum marginibus inferis clare ochracescenti-rufis: cauda ochracescenti-cinerea, marginibus angustis externe olivacescentibus: rostro obscure fusco; pedibus corylinis.

Long. tota 5·0, alæ 2·7, caudæ 2·4.

Hab. In Nov. Granada int.

Mus. P. L. S.

This is a well-marked species, easily recognizable by its bright-rufous face and breast. In structure it agrees well with *Leptopogon superciliaris*, the type of the section, the bill being rather shorter, but precisely of the same form. The fourth quill is longest, slightly exceeding the third and fifth, which are equal. The first is rather shorter than the eighth, ninth, and tenth.

6. LEPTOPOGON PÆCIILOTIS.

Supra olivaceus, pileo plumbeacente, loris albescentibus; plumis auricularibus ad basin flavicantibus, inde distincte nigris: subtus flavo-virens; alis nigricanti-fuscis, tectricibus omnibus macula terminali ochracea præditis, remigibus olivaceo marginatis: cauda fuscescente, extus olivaceo anguste marginata: rostro superiore nigro, inferiore omnino flavo: pedibus pallide corylinis.

Long. tota 4·5, alæ 2·3, caudæ 2·0.

Hab. In Nov. Granada int.

Mus. P. L. S.

This species is closely allied to *Leptopogon superciliaris* (or at

least to the Ecuadorian species which I identify with Tschudi's wretched figure), but is smaller in size, of a brighter and uniform greenish yellow below, and has the lower mandible wholly yellow, and feet pale. In *L. superciliaris* the lower mandible is black, like the upper. I have two similar specimens of Bogotan origin, and a third (imperfect) from Venezuela, which may also belong to the same species, though it wants the conspicuous ochraceous tipplings of the wing-coverts.

7. MYIOBIUS BELLUS.

Obscure olivaceus, pilei subcristati plumis interne rubro-igneis; alis nigris late ochraceo bifasciatis, harum remigibus eodem colore limbatis: cauda fuscescenti-cinerea: subtus flavus; pectore fulvo tincto: rostro superiore nigro, inferiore flavo: pedibus plumbeis.

Long. tota 4·2, alæ 2·3, caudæ 2·0.

Hab. In Nov. Granada int.

Mus. P. L. S.

This species of *Myiobius* is closely allied to the *M. pulcher* of Ecuador (P. Z. S. 1860, p. 464), and must be placed next to that species in the order in which I have arranged the genus (*l. c.*). It is, however, easily distinguishable by its larger size and larger wings, though nearly alike in coloration.

8. EMPIDochANES PÆCILURUS.

Fuscescenti-griseus, pileo obscuriore; loris fuscescentibus; alis et cauda nigricanti-fuscis, illarum tectricum apicibus et secundariorum marginibus externis albescens: subtus pallide ochraceus, lateraliter cinerascens; subalaribus, remigum et reetricum (nisi duarum mediarum) marginibus internis latis et crisso rufis, fere rubiginosis: rostro et pedibus nigris.

Long. tota 5·5, alæ 2·8, caudæ 2·3.

Hab. In Nov. Granada int.

Mus. P. L. S.

This Tyrant-bird, of which I have a single specimen, is readily distinguishable by its parti-coloured tail. The inner webs of all, except the medial pair, are broadly margined with clear rufous. This colour increases towards the base, and gradually occupies the whole of the vane. The outer tail-feather is also narrowly margined with the same colour. The under wing-coverts and inner margins of the quills are likewise similarly coloured. The fourth primary is rather longer than the third, which slightly exceeds the fifth, and longest; the second is slightly shorter than the third, the first being of about the same length as the eighth and ninth.

This bird has much the general appearance of an *Empidonax*, though abnormal in colouring. I place it for the present as a second species of the allied southern genus *Empidochanes*, of which the type is *Muscicapa oliva*, Bodd. (Pl. Enl. 574. fig. 2). This generic term I propose to use in the place of *Myiophobus* of Cabanis and Heine,

as the latter name was previously given by Reichenbach to *Myiobius nœvius**, for which and its allies I venture to employ it.

Fam. PSITTACIDÆ.

9. UROCHROMA STICTOPTERA.

Psittaceo-viridis: alis extus nigris, macula in mediis tectricibus roseo-rubra; remigum marginibus externis et secundariis dorso proximis viridibus: caudæ rectricibus intus paululum aure-scentibus: rostro pallido: pedibus fuscis.

Long. tota 6·0, alæ 5·0, caudæ 2·5.

Hab. In Nov. Granada int.

Obs. This parrot appears to belong to the group called *Urochroma* by Prince Bonaparte, but is quite different from any known member of that section. The tail is nearly square at its termination, the two medial rectrices being slightly acuminate, the others rounded, but presenting the appearance of being rather worn.

ON TWO NEW SPECIES OF TYRANT-BIRDS FROM ECUADOR. BY P. L. SCLATER, M.A., PH.D., F.R.S., SECRETARY TO THE SOCIETY.

I am indebted to Mr. Gould's kindness for two specimens of Tyrant-birds from a collection recently received by him from the highlands of Ecuador. They are of nearly allied species, but stand best in the two neighbouring sections of *Ochthæca* and *Mecocerculus*. By the latter name I propose to replace *Myiarchus* (Bp., nec Cab.), using it as a generic title for *Fluvicola leucophrys*, Lafr. et D'Orb., and its allies.

1. OCHTHÆCA CITRINIFRONS.

Obscure cinerea, dorso postico rufescente: fronte distincte citrino-flavo: superciliis elongatis, albescens; alis caudaque nigricantibus, illarum marginibus externis rufescentibus: subtus omnino pallide cinereus: rostro et pedibus nigris.

Long. tota 4·75, alæ 2·5, caudæ 2·25.

Hab. In rep. Æquator.

Mus. P. L. S.

Obs. Affinis *Ochthæcæ albidemati*, Lafr., sed fronte citrino facile dignoscenda.

2. MECOCERCULUS GRATIOSUS.

Rufescenti-olivaceus, pileo fusco; fronte distincto et superciliis elongatis aureis: alis fusco-nigris, tectricum utriusque et secundariorum marginibus externis rufescentibus: cauda fusco-nigra: subtus olivaceus, ventre medio flavo: rostro et pedibus nigris.

Long. tota 4·5, alæ 2·5, caudæ 2·2.

Hab. In rep. Æquator.

Mus. P. L. S.

Obs. Affinis *Mecocerculo diademati*, sed rostro brevioribus, et harum tectricibus rufescenti-bifasciatis distinguendus.

* See P. Z. S. 1860, p. 466.

DESCRIPTION OF SOME NEW SPECIES OF ENTOZOA.

BY W. BAIRD, M.D., F.L.S., ETC.

1. ASCARIS UNDULOSO-STRIATA, Baird.

Head naked, with well-marked, roundish labial lobes. Body of a white colour, with a well-defined line running longitudinally through its whole length; smooth, but finely wavyly striated longitudinally, instead of transversely. The greatest diameter is at the anterior extremity, the body tapering gradually towards the tail, and terminating in a finely subulate point. In the female this point is long, and gradually becomes very fine; in the male the body, posteriorly to the opening from which issue the male organs or spicula, suddenly contracts and tapers quickly to a very sharp subulate point. The body shows no transverse striæ, the only visible ones being longitudinal and finely waved.

Length of female $5\frac{1}{2}$ lines, male $4\frac{1}{2}$ lines.

Hab. Intestines of the King-Vulture (*Sarcorhamphus papa*). (*Mus. Brit.*)

2. SCLEROSTOMA MUCRONATUM, Baird.

Body semicylindrical, of a brownish colour; thickest in the middle, attenuating towards each extremity, but more so at the anterior extremity. Integument strongly striated, or almost plicated. Head continuous with body. Male —? Female with the vulva situated about one-third from the posterior extremity, and marked with a strong tubercle. The tail is armed at its extremity with a strong, sharp spine, which is slightly incurved.

Length of female 4 lines; greatest breadth about $\frac{1}{2}$ line.

Males of this species have not been observed.

Hab. Intestines of the Palluma (*Phrymaturus palluma*) from Chili. (*Mus. Brit.*)

3. PENTASTOMA TERETIUSCULUM, Baird.

Head rounded and truncated. Body cylindrical, of a red colour, considerably more attenuated posteriorly. Tail shortly bilobed. Greatest width of body about 4 or 5 lines below the head; it then gradually attenuates till it reaches the posterior extremity. Integument annulosely ringed; rings about one-third of a line in width.

Length 2 inches 5 lines; breadth 3 lines.

The only specimen taken is a female.

Hab. Taken from the mouth of an Australian Snake (*Hoplocephalus superbus*) which died lately in the Zoological Society's Gardens, Regent's Park. (*Mus. Brit.*)

For the three above-described species I am indebted to Mr. Edward Gerrard, of the British Museum.

4. TETRARHYNCHUS MINUTO-STRIATUS, Baird.

Head of a white colour, solid and smooth. Neck much narrower than head, nearly of the same dimensions throughout its whole length, and minutely and finely striated. Bothria ear-shaped, rather broader at upper than lower part; open above, adnate below, with

callous, raised edges. Proboscides short and club-shaped. Body a minute papilla.

Length of head 2 lines; breadth $1\frac{1}{2}$ line. Length of neck from 1 inch to 13 lines; breadth 1 line.

Hab. Taken from a species of *Brama*, off Madeira. (*Mus. Brit.*)

5. TETRARHYNCHUS BREVIS, Baird.

The animal is of a white colour, and is very short and thick. The head is large and broad, and the bothria are ear-shaped, rounded, and very much thickened on the edges. The neck is very short. The proboscides cylindrical and of considerable length.

Length of whole animal 3 lines; head nearly 2 lines; neck 1 line.

Hab. Taken from a species of marine Eel at Madeira. (*Mus. Brit.*)

6. TETRARHYNCHUS QUADRIPAPILLOSUS, Baird.

Head of considerable size; bothria large, rotundate-oval. Neck long, slender, terminating in an enlarged body enclosed in a sheath, which gives off at its lower part four papillæ disposed in such a manner as to interlock with each other and form a terminating conical point.

Length of whole animal about $3\frac{1}{2}$ lines.

Hab. Taken from the liver of *Alepocephalus*, sp., at Madeira. (*Mus. Brit.*)

For these three species of *Tetrarhynchus* I am indebted to J. Yate Johnson, Esq., C. M. Z. S.

7. BOTHRIOCEPHALUS (TETRABOTHRUM) JUNCEUS, Baird.

Bothria four, attached to the head by their face, large and somewhat auriculiform. Head elliptical. Neck slender; first segments very fine, gradually becoming broader, but in no part exceeding half a line in breadth. Apertures of genital organs unilateral.

Length upwards of $4\frac{1}{2}$ inches; breadth of neck $\frac{1}{10}$ th of a line; broadest segments about $\frac{1}{2}$ a line.

Hab. Intestines of the King-Vulture (*Sarcorhamphus papa*). (*Mus. Brit.*)

For this species I am indebted to Mr. E. Gerrard.

April 8th, 1862.—Dr. J. E. Gray, V.P., in the Chair.

Mr. Gould exhibited to the Meeting and described two new species of Humming-Birds, which he had recently received from Ecuador; a new *Fregilus* from the Himalayas, which had hitherto been regarded as identical with the European bird of that form; and a species of *Prion*, which appears to constitute an additional member of that peculiar genus of oceanic birds.

The Humming-Birds were named, respectively, *Heliothrix longirostris* and *Aphantochroa hyposticta*; the *Fregilus*, *F. himalayanus*; and the *Prion*, *P. magnirostris*; and were thus described:—

HELIOTHRIX LONGIROSTRIS, Gould.

Male: upper surface and wing-coverts brilliant green; wings dark purplish brown; four middle tail-feathers bluish black, the remainder pure white; lores, line under the eye, and ear-coverts velvety black, terminating in a small tuft of violet-blue feathers; below the black line a stripe or moustache of glittering green; chin, throat, and under surface snow-white; bill black; legs and feet fleshy brown.

Total length $5\frac{1}{4}$ inches; bill $1\frac{1}{8}$; wing $2\frac{7}{8}$; tail $2\frac{1}{4}$.

Hab. Ecuador.

Remark.—I have been for years receiving from Ecuador examples of what I believed to be females of a new species of *Heliothrix*; but now in 1862 I have received an adult male, which convinces me that my opinion was correct, and I have therefore described it under the above appellation. In comparison with the other species of the genus, I find it to be most nearly allied to *H. auritus*, being similarly coloured to that bird; it is, however, of larger size, has a considerably longer bill, and in my specimen, which is doubtless adult, the crown is devoid of the glittering hue seen in *H. auritus*; at the same time, it is somewhat brighter than the back.

APHANTOCHROA HYPOSTICTA, Gould.

All the upper surface, wing-, and tail-coverts deep green; wings purplish brown; tail dull purplish green, deepening into blackish brown at the tip, the two outer feathers on each side very slightly fringed with white at the tip; feathers of the throat, breast, and centre of the abdomen dull white at the base, with a spot of dull green near the tip, giving those parts a spotted appearance; remainder of the under surface dull green; under tail-coverts dull green at the base, deepening into black near the end, and fringed with grey; tarsi and thighs rather thickly clothed with white feathers; bill black, except at the base of the under mandible, which appears to have been flesh-colour.

Total length $4\frac{1}{2}$ inches; bill $1\frac{3}{16}$; wing $2\frac{3}{4}$; tail $1\frac{7}{8}$.

Hab. Ecuador.

Remark.—I have several specimens of this bird, all similarly coloured; and I believe the specimen from which the above description was taken to be fully adult. It differs from *A. cirrhochloris* in its spotted breast, in its shorter tail, and its rather more lengthened and curved bill. I received the examples I possess from Quito, but I believe they were collected near the waters of the Upper Napo.

FREGILUS HIMALAYANUS, Gould.

Plumage of the head and the whole of the body, both above and beneath, deep glossy black; wings and tail black, glossed with purple and green; bill and feet coral-red; nails black.

Hab. The Himalayas.

Remark.—This fine Chough differs so greatly in point of size from the species killed in this country that I have no hesitation in de-

scribing it as distinct; and that ornithologists may more clearly perceive the great difference alluded to, I annex an accurate admeasurement of male examples from India and Europe.

<i>Fregilus himalayanus</i> .		<i>Fregilus graculus</i> .	
	Inches.		Inches.
Total length	15 $\frac{1}{2}$	Total length	14
Bill	2 $\frac{1}{4}$	Bill	1 $\frac{7}{8}$
Wing	12 $\frac{3}{4}$	Wing	10 $\frac{3}{4}$
Tail	6 $\frac{3}{4}$	Tail	5 $\frac{1}{4}$
Tarsi	2 $\frac{1}{4}$	Tarsi	1 $\frac{3}{4}$

I may add that specimens from Italy and from Wales are precisely alike in all their admeasurements.

PRION MAGNIROSTRIS, Gould.

Head, all the upper surface and sides of the chest blue-grey; lesser wing-coverts and the edge of the shoulder brown; the remainder of the wing blue-grey, deepening into slate-grey at the tips of the inner primaries; the outer primaries slaty black, fading into white on the inner edge; scapularies deepening into slate-grey near the end, and tipped with pale grey; tail very light grey, the centre feathers tipped with blackish-brown; chin, throat, centre of the breast, abdomen, and under surface of the wing creamy white; a faint wash of blue on the lower part of the flanks and the under tail-coverts; bill blue, deepening into black on the sides of the nostrils, at the tip and along the side of the lower mandible; irides brown, legs beautiful light blue.

Total length 11 inches; bill, base to tip 2, breadth at base $\frac{1}{16}$; wing 8; tail $4\frac{1}{2}$; tarsi $1\frac{1}{2}$.

Hab. Unknown.

Remark.—As the name I have assigned to it implies, this species differs from every other member of the genus in the extraordinary size of its bill. In form and colouring it is precisely similar to the other *Priones*, all of which are remarkably alike in these respects—not so, however, in their bills, which consequently present the best specific characters.

REMARKS ON A SPECIMEN OF ALEPISAURUS FEROX RECENTLY OBTAINED AT MADEIRA. BY JAMES YATE JOHNSON, CORR. Mem. Z.S.

Having lately procured a specimen of this rare and interesting fish (which I have had the pleasure of presenting to the British Museum), I beg leave to lay before the Society the result of my observations upon it when in a fresh state. The remarks I shall make will be for the most part supplementary to Mr. E. T. Bennett's long description of another specimen from this locality, printed in the first volume of the 'Transactions of the Zoological Society*'; but I hope they will be found to have some bearing upon the question of the

* See Trans. Zool. Soc. vol. i. p. 395.

ichthyological position of the genus, which has been placed in no fewer than four families by different naturalists. Mr. Lowe, who founded the genus on the present species, placed it in Cuvier's family of *Tænioides*. M. Valenciennes referred the genus to the *Salmonidæ*. Sir John Richardson, in his article on Ichthyology in the 'Encyclopædia Britannica,' assigned it, on page 213, to the *Sphyrænidæ*, and on page 248 to the *Scopelidæ*. Lastly, that able ichthyologist, Dr. Günther, asserts that its natural affinity is decidedly Siluroid (Cat. Acanth. Fishes in Brit. Mus. ii. p. 353). A consideration of Mr. Bennett's description and of the additional points about to be mentioned, some of which appear to have been hitherto overlooked, will lead, I think, to the conclusion that the position assigned to this fish by Dr. Günther is the true one.

The specimen lately obtained is $53\frac{1}{2}$ inches long, the head measuring $7\frac{3}{8}$ inches. The height of the body in front of the pectoral fin is $4\frac{1}{2}$ inches. The branchiostegal membrane is supported by seven rays, which number may probably be taken as the normal one, as it agrees with one of Mr. Lowe's specimens, the other of which had six rays in that membrane. The fish has no barbels, in which negative character it resembles the genus *Batrachocephalus*, a member of the *Siluridæ*. The large eye ($1\frac{1}{8}$ inch in diameter) is surrounded by an adipose skin, which, on the posterior side, intrudes as a transparent veil upon the eye, covering it to the extent of one-third.

The *subopercle* of which Mr. Bennett spoke appears to be the *interopercle*, which has been extraordinarily developed at the expense of the subopercle, the latter being wanting. Both this and the *opercle* (which measures 2 inches across) are remarkable for their paper-like tenuity and the high radiating striatures on their surfaces. The hinder portion of the preopercle forms a strong bony ridge, also striated. The *coracoid* is very broad at its middle, where it is sculptured with radiating striæ like the clavicle. The suprascapular and the narrow scapular are longitudinally striated. The striæ on all the bones are strong.

The remarkably high first dorsal fin has forty-one rays, and the deeply-forked caudal fin nineteen rays, whilst the second dorsal is adipose—in these respects agreeing with Mr. Bennett's description; but the pectoral fin has fourteen in place of fifteen rays, the ventral fin ten in place of nine rays, and the anal fin sixteen in place of seventeen rays. The first ray of the *pectoral* fin in the fish examined by Mr. Bennett was the longest. In this specimen the fifth and sixth rays are the longest (being $7\frac{1}{2}$ inches long), and they are rather more than twice the length of the strongly-serrated first ray, which is superior in length only to the three last. The first *dorsal* fin (the base of which is 32 inches long) arises out of a groove, each margin of which consists of a loose fold of adipose skin. The first ray is jointed above, and is strongly serrate along its free edge, like the first rays of the pectorals and ventrals. The first fifteen or sixteen rays appear to be simple, the others sparingly branched; but the only perfect ray in my specimen is the fourth, and that is

12 inches long. The first ray of the *ventral* fin, though simple and strong below, is jointed above and ends in a weak point. The first two rays of the *anal* fin are short, the succeeding four long, and the remaining rays short. The anterior part of this fin is fleshy, and at the base of this part there is a groove on each side. The length of the base of the whole fin, compared with the total length of the fish, is as 1 to $11\frac{1}{3}$, instead of as 1 to 10 in Mr. Bennett's example. The *caudal* fin measures $7\frac{1}{4}$ inches in length, and the tips of the lobes are 9 inches asunder.

Along the middle of each side on the posterior half of the body there is a low adipose keel of a black colour; and this marks the course, at this part, of the lateral line, which is unarmed throughout. The fish is covered with a thin smooth skin, and is entirely destitute of scales.

As to the *dentition*, there are at each side of the mandible, beginning at the posterior end, ten teeth of moderate size, directed backwards, and flattened, triangular, and pointed. Then come three long-pointed teeth, which decrease in length forwards; then five subulate teeth, having before them two long teeth on one side of the mandible, on the other only one; lastly, at the tip, one acicular tooth. The weak slender premaxillary is set with a single row of small sharp triangular teeth, about eighty-five on each side. The palatine bones are set posteriorly with a row of larger teeth, which, being flat, sharp, and triangular, resemble the teeth of a saw. They are directed backwards, and correspond in size and shape with the opposite teeth of the mandible. At the anterior part of each palatine bone is a row of seven or eight long formidable teeth, the hinder ones being larger; they are flattened, dagger-like, and are directed backwards. Behind these on one side are two long teeth, but only one such tooth on the other. The vomer is toothless.

With reference to the figure accompanying Mr. Bennett's description, it may be remarked that the nostrils are wrongly indicated, being much posterior to the place at which they are represented to be. They are really situated a little nearer the eyes than the snout. The two orifices of each pair, being small and close together, may have been overlooked; and a couple of slight depressions with a bony tubercle, in advance of their true position, have been apparently mistaken for them. Neither does the colouring of the figure well agree with my specimen, which, when fresh from the water, had a dark-bluish-grey back, with sides and belly of a silvery grey, reflecting a brassy lustre in certain directions of the light. The dorsal, pectoral, and caudal fins were a deep black; the ventral and anal fins a silvery grey. The indigo-blue spots in pairs near the lateral line in the figure seem to occupy the places of colourless mucous pores, which were observed in my specimen at irregular intervals near that line.

From this fish were obtained two species of Entozoa, viz. some large specimens of a *Distoma*, and several examples of a Tænioid worm, measuring altogether some feet in length.